

**Remarks/Arguments:**

Claims 1, 3-21 and 23-25 are pending.

Claims 1, 14, 16, 17, 19-21 and 23-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida *et al.* (US 2003/0053412) in view of Tong *et al.* (US 6,337,658). Applicants respectfully request reconsideration. In particular, neither Yoshida *et al.*, Tong *et al.* nor their combination disclose or suggest:

... each of the plurality of antennas configured to receive a radio frequency (RF) signal from a respectively different direction...

... receiving the RF signal from the plurality of antennas, to receive the RF signal from multiple directions...

... sending a direction control signal to the plurality of antennas such that signals from at least two of the plurality of antennas are combined to receive the RF signal from the preferred direction...

as required by claim 1. While not identical to claim 1, claims 16 and 21 include similar limitations.

Tong *et al.* concern a transmit antenna alignment peak search method and apparatus. As described in the background of Tong *et al.*, "the dish antenna at the ground terminal can be aligned with the satellite by monitoring received signal strengths and frequency spectra...." Tong *et al.* disclose using only a single dish antenna and a single characteristic to align the antenna. In the examples given, Tong *et al.* use "an alignment accuracy indication (which is assumed to be a SNR measurement (signal-to-noise ratio) i.e. Eb/No for this example)...." (See Col.4, lines 50-52). The method and apparatus disclosed by Tong *et al.* determine an alignment direction based on the maximum value of Eb/No. (See Col. 6, lines 49-54). As acknowledged by the Examiner, Tong *et al.* do not disclose or suggest, "receiving the RF signals from the plurality of antennas, to receive the RF signal from multiple directions," as required by claims 1, 16 and 21. Accordingly, Tong *et al.* cannot disclose or suggest sending a direction control signal such that signals from at least two of the plurality of antennas are combined to receive the RF signal from the preferred direction, as required by claims 1, 16 and 21. Thus, Tong *et al.* do not include all of the features of claims 1, 16 and 21.

Yoshida *et al.* disclose, in Figs. 7, 11 and 14, an OFDM receiving apparatus including directional antennas 11<sub>1</sub> - 11<sub>4</sub> directed to respective sectors S<sub>1</sub> - S<sub>4</sub>. The receiving apparatus also includes a reception power measurement unit 14 that measures the reception signal

strength and an antenna selection unit 15 that selects the antenna 11 having a maximum reception power. (See paragraph [0060]). The reception apparatus compensates the demodulated selected antenna signal by an average value of fading variation, via calculation unit 18 and fading compensation unit 19. (See paragraph [0061]).

Yoshida *et al.*, however, do not teach that a direction control signal is sent to plurality of antennas such that signals from at least two of the plurality of antennas are combined to receive the RF signal from the preferred direction, as required by claims 1, 16 and 21. In Figs. 7, 11 and 14, Yoshida *et al.*, instead, teach selecting one of the antennas 11 that has a maximum reception power via antenna selection unit 15. Thus, Yoshida *et al.* do not include all of the features of claims 1, 16 and 21.

Applicants note that Yoshida *et al.* disclose, in Fig. 16, combining received signals from both of the 180° sector antennas 11<sub>1</sub> and 11<sub>2</sub> if an error floor due to inter-carrier interference (ICI) is less than a required BER, based on the value of the moving velocity. (See paragraphs [0081-0082]). Yoshida *et al.*, however, teach combining the signals of all of the antennas. Thus, Yoshida *et al.* can not combine signals from at least two of a plurality of antennas to receive the RF signal from a preferred direction, as required by claims 1, 16 and 21. In Fig. 16, Yoshida *et al.*, instead, combine the signals of all antennas. Accordingly, the RF signal of Yoshida *et al.* is received omnidirectionally, not from a preferred direction. Accordingly, with respect to Fig. 16, Yoshida *et al.* do not include all of the features of claims 1, 16 and 21.

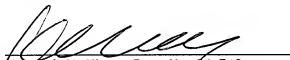
Furthermore, Applicants note that Yoshida *et al.* disclose, in Fig. 20, an OFDM receiving apparatus that includes a digital beam former (DBF) 52 that performs beam forming in a moving direction, using moving-direction detector 51. Moving-direction detector 51 detects the moving direction by switching among antennas to sweep an antenna beam direction over an angle of 360°. (See paragraph [0093]). Yoshida *et al.*, however, do not teach receiving the RF signal from the plurality of antennas, to receive the RF signal from multiple directions, as required by independent claims 1, 16 and 21. In Fig. 20, Yoshida *et al.*, instead, direct each antenna to a same direction (i.e., by performing beam forming). Accordingly, Yoshida *et al.* can not teach combining antenna signals to receive the RF signal from a preferred direction, based on receiving an RF signal from multiple directions, as required by claims 1, 16 and 21. Thus, Yoshida *et al.* do not include all of the features of claims 1, 16 and 21.

Because neither Yoshida *et al.*, Tong *et al.*, nor their combination, disclose or suggest all of the features of claim 1, 16 and 21, these claims are not subject to rejection under 35 U. S. C. § 103(a) as being unpatentable over Yoshida *et al.* in view of Tong *et al.* Claims 14, 17, 19, 20 and 23-25 depend from respective claims 1, 16 and 21. Thus, these claim are not subject to rejection under 35 U. S. C. § 103(a) in view of Yoshida *et al.* and Tong *et al.* for at least the same reasons as their base claims.

Applicants appreciate the indication in the Office Action that claims 3-13, 15 and 18 are objected to as being dependent upon rejected base claims and that these claims would be allowable if amended to be in independent form including the limitations of their base claims and any intervening claims. Because, as set forth above, claims 1 and 16 are not subject to rejection, claims 3-13, 15 and 18 are also not subject to rejection.

In view of the foregoing amendments and remarks, Applicant requests that the Examiner reconsider and withdraw the rejection of claims 1, 14, 16, 17, 19-21 and 23-25 and the objection to claims 3-13, 15 and 18.

Respectfully submitted,



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KNN/DMG/pb

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